Ministry of External Affairs
New, Emerging & Strategic Technology (NEST) Division
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Brief about the NEST Division

Introduction

The New, Emerging and Strategic Technologies (NEST) Division was set up in 2020 to engage in technology diplomacy and deal with the foreign policy and international legal aspects of new and emerging technologies. The Division functions under the supervision of a Head of Division and enables more active participation of India in global forums in the area of technology governance and promoting our national interests in that context. With the rise in technological advances and human machine interactions, a technology led transition in the knowledge economy is underway globally. Technology is increasingly becoming a core dimension of global, economic and industry agendas and are vital for fostering innovation, driving economic growth, and addressing global challenges. In an interconnected and rapidly evolving world, no single country can independently navigate the complexities of technological advancement and its geopolitical influence. In this context, the NEST Division within the Ministry of External Affairs serves as a nodal point for the Ministry in keeping it upto date and coordinating with domestic stakeholders and collaborating with foreign partners in dealing with the changing global scenario amidst the rising importance of new and emerging technologies such as 5G, 6G, Artificial Intelligence, Biotech, Semiconductors, Clean and Sustainable Technologies, among others. Additionally, the division also builds capacity on new and emerging technologies within the Ministry that will enable India's Diplomacy to effectively navigate the intersection of technology and international relations, addressing the challenges and opportunities technology presents on the world stage and foster international cooperation to address these challenges and evolve India's position on the global tech governance.

The detailed terms of reference for the NEST Division are as follows (i) function as the nodal point to evolve and coordinate Indian Positions for negotiations regarding technology governance rules, standards and architecture in the multilateral or plurilateral context, including at the UN and relevant international organizations (ii) Assess foreign policy and international legal implications of new and emerging technologies and technology based resources (iii) Build policy interfaces with key partner countries and international organizations in this context (iv) Assess demand driven requirements of new emerging and strategic technologies in India in collaboration with line ministries etc. and facilitate, as synapse, the interlocutor/partner interfaces for their acquisition (v) Interface with line Ministries & eventually State governments but without taking on the role of their respective International Cooperation Divisions/Departments or the work done in this context in MEA

Divisions (vi) Strengthen the role of Missions as the 'field synapses' in facilitating supply related chains for such technologies in this context (vii) Identify new emerging technologies with strategic import for India (viii) Undertake assessments on strategic implications of sources and deployments of such technologies for national security in India (ix) Identify and assess strategies behind deployment and operation of new and emerging technologies by partner countries in India (x) Strengthen India's role as a determinant player in determining the national and global perspectives on new emerging and strategic technologies.

NEST Division's Engagements and Initiatives on New, Emerging and Strategic Technologies (2020-2025)

Since its inception, the NEST Division has actively engaged to evolve and coordinate India's Positions for negotiations regarding technology governance rules, standards and architecture in the multilateral or plurilateral context, including at the UN and relevant international organizations. The Division has also played an instrumental role in building policy interfaces with key partner countries and international organizations and in strengthening the role of Missions as the 'field synapses' in facilitating supply related chains for new and emerging technologies. These engagements have strengthened India's role as a determinant player in shaping the national and global perspectives on new emerging and strategic technologies.

NEST Division has contributed to the knowledge database on policy initiatives pertaining to New, Emerging and Strategic Technologies such as the India UK 'Technology Security Initiative (TSI), 2nd Review Meeting of the India-U.S. initiative on Critical and Emerging Technology (iCET), Mineral Security Partnership, EU – India Trade and Technology Council, QUAD among others. Multilateral engagements where NEST actively assisted in policy discussion include BRICS Working Group on ICT, Roadmap for the Implementation of the Co-operation Programme of the Member States of the Shanghai Cooperation Organization on the Development of Artificial Intelligence, among others. The Division also provided its inputs on various policy documents forwarded by line ministries, industry bodies and think tanks on various new and emerging technologies such as carbon market for low carbon technologies, green hydrogen, long duration energy storage, issue briefs on critical and strategic minerals, emerging technology application in healthcare, biotech, life sciences research, data security, agriculture, border management. As a part of a wider outreach strategy, the Division has been circulating a monthly NEST Newsletter, detailing and tracking various developments related to new and emerging technologies that have implications for India.

In order to advance India's technology diplomacy, NEST Division of the Ministry of External Affairs has also been playing an instrumental role in leveraging India's growing expertise in areas like digital public infrastructure, fintech, space exploration, semiconductors, green and sustainable technologies, telecom and artificial intelligence to foster international collaboration and bolster India's global influence. In this context, NEST Division has assisted

the line ministries in organizing various international events such as the Global Partnership on Artificial Intelligence (GPAI) Med-Year Summit, Global India AI Summit, 2nd edition of the International Conference on Green Hydrogen, 4th edition of RE-Invest 2024, Semicon India 2024, India Mobile Congress and International Telecommunications Union - World Telecommunication Standardization Assembly (ITU-WTSA-2024).

NEST Division of the Ministry of External Affairs has also been playing an instrumental role in strengthening India's role as a determinant player in determining the national and global perspectives on new, emerging and strategic technologies in statements deliberated in a plurilateral or regional context including GPAI New Delhi Declaration, GPAI Serbia Declaration, UNGA Resolution on Seizing the opportunities of safe, secure and trustworthy artificial intelligence systems for sustainable development, *UNGA Resolution on* "Enhancing International Cooperation on Capacity-building of Artificial Intelligence", United Nations Pact for the Future and Global Digital Compact adopted at the United Nations Summit of the Future 2024.

NEST Division has been, fostering international cooperation, collaboration, and knowledge exchange with foreign countries and multilateral institutions to advance India's national interests on technologies such as green hydrogen, biotech, telecom, space and geospatial technologies, quantum, semiconductors, AI among others as designated under the policies and missions pertaining to these technologies. The Division was instrumental in helping India join the Global Partnership on Artificial Intelligence (GPAI) as a founding member, in June 2020. The Ministry of Electronics and Information Technology (MeitY) is a nodal point of contact that represents India at the GPAI proceedings. Additionally, the Division has also been assisting the line Ministries and Departments in the signing of Memorandum of Understanding (MoUs) such as MoU between Survey of India and National Mapping Agencies of Russia and Nigeria, MoU between International Energy Agency and the Government of India's Ministry of Mines, MoU with Israel's Ministry of Energy and Infrastructure on Cooperation in the field of Geophysical Exploration, MoU on India - Singapore Semiconductor Ecosystem Partnership, India-Germany Innovation and Technology Partnership Roadmap, Indo-German Green Hydrogen Roadmap between India and Germany, among others.

The Division has organized several discussions and briefing sessions on new, emerging, strategic and critical technologies such as semiconductors, green hydrogen, and geo-spatial technologies, Global Fintech Festival 2024, Technical workshop on Global CBPR Forum with various stakeholders which included concerned ministries, industry representatives, Indian Missions abroad and the Ministry. NEST Division also facilitated consultations of Survey of India with its counterpart agencies of 16 countries such as Sri Lanka, Qatar, Singapore, France, Argentina, Israel among others. The discussions helped the stakeholders develop an understanding of various policy initiatives of the Government regarding these technologies and explore cooperation in these areas with foreign countries.

The Division officials have also previously participated in various technology related global events such as the European Hydrogen Week, Global DPI Summit, Geneva Science and Diplomacy Anticipation (GESDA) Summit, ITU-WTSA Summit, Cybertech Global Event, Cyber and Tech Retreat, GPAI Summit 2024 among others.

India's Approach Towards New and Emerging Technologies and Future Prospects.

India has a multi-pronged approach focussing on strengthening international collaboration, building technological self-reliance for strengthening global supply chains of technologies, bridging science technology and innovation divide within and between countries while ensuring that innovation remains inclusive, ethical, and sustainable. Looking ahead, we aim to further strengthen global tech partnerships by deepening engagements with both the Global North and South to bridge the science, technology and innovation divide within and between countries. We are committed to fostering inclusive, equitable, and secure global technology governance emphasizing the importance of balancing innovation with regulation to address challenges such as cybersecurity threats, digital divides, and data privacy concerns. By enhancing domestic technological capabilities, strengthening cybersecurity and digital trust, promoting tech skilling and talent diplomacy, fostering trusted global supply chains, digital sovereignty, and cross-border technology collaborations, we aim to become a key architect of the global tech-driven future.